

TITLE
JOURNAL
COMMENT

Washu-Merck EST Project 1997
Unpublished (1997)

On Sep 12, 1996 this sequence version replaced g1:1392936.
Contact: Wilson RK

Washington University School of Medicine
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This clone is available royalty-free through LNLN; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -28m13 rev2 ET from Amersham
High quality sequence stop: 459.

FEATURES
source

1. 503

/organism="Homo sapiens"

/db_xref="GDB:6039163"

/db_xref="taxon:9606"

/clone="IMAGE:795718"

/clone_lib="Soares_infant brain INTB"

/sex="male"

/lab_host="DH10B"

/note="Vector: pT73D-Pac (Pharmacia) with a modified
polylinker; Site 1: Not I; Site 2: Eco RI; 1st strand cDNA
was prepared from mRNA obtained from Clontech
Laboratories, Inc., and primed with a Not I - oligo(dT)
primer [5']
TGTTCACATCTGAGTGGAGCGCGCCCAATTTTCTTTTCTTTT 3']
Double-stranded cDNA was ligated to Eco RI adaptors
(Pharmacia), digested with Not I and cloned into the Not I
and Eco RI sites of the modified pT73 vector. Library
went through one round of normalization to Cot5, and was
constructed by Bento Soares and M. Fatima Bonaldo."

BASE COUNT 105 a 136 c 149 g 113 t

ORIGIN

Query Match 9.7%; Score 386.8; DB 34; Length 503;
Best Local Similarity 88.2%; Pred. No. 2.2e-77;
Matches 443; Conservative 0; Mismatches 57; Indels 2; Gaps 2;

QY 1387 gctatctcagatctgtgcccacaggtgacccagctctcaggaagaatagactg 1446

DB 1 gccatctcagatctgtgcccacaggtgacccagctctcaggaagaatagactg 1446

QY 1447 ctctacctctgagagac-gagagatgacacctcaccagggctgtgcatctgagctcagct 1505

DB 60 ctctacctctgagagac-gagagatgacacctcaccagggctgtgcatctgagctcagct 1505

QY 506 cagtgtcttgagagatctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1565

DB 120 cagcgtcttgagagatctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1565

QY 1566 gtacacagatctgctcctgtgtggtcccatctgagagatgacacagctgacacccagca 1625

DB 180 gtacacagatctgctcctgtgtggtcccatctgagagatgacacagctgacacccagca 1625

QY 1626 ctgtgagcgtctcagagatctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1685

DB 240 ctgtgagcgtctcagagatctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1685

QY 1686 gaagcttcagcgtctgagatctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1745

DB 300 gaagcttcagcgtctgagatctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1745

QY 1746 tataagagcagcagatctgtctctgtgtcccaagacacacagcagcttgaagcagaaat 1805

DB 360 tataagagcagcagatctgtctctgtgtcccaagacacacagcagcttgaagcagaaat 1805

QY 1806 gtttgaagcttcagcgtctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1865

DB 420 gtttgaagcttcagcgtctgacctgtgtcccaagacacacagcagcttgaagcagaaat 1865

QY 1866 ctgggacatctgtgtgagc 1887
DB 480 atgggacatctgtgtgagc 501

RESULT 4

R54387

LOCUS

DEFINITION

R54387

VERSION

KEYWORDS

SOURCE

ORGANISM

REFERENCE

AUTHORS

TITLE

JOURNAL

COMMENT

Unpublished (1995)

Contact: Wilson RK

Washington University School of Medicine

4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108

Tel: 314 286 1800

Fax: 314 286 1810

Email: est@wustl.wustl.edu

Insert Size: 2134

High quality sequence stops: 99 Source: IMAGE Consortium, LNLN. This

clone is available royalty-free through LNLN; contact the IMAGE

Consortium (info@image.llnl.gov) for further information.

Insert Length: 2134 Std Error: 0.00

Seq primer: M13RP1

High quality sequence stop: 99.

Location/Qualifiers

1. 517

/organism="Homo sapiens"

/db_xref="GDB:412032"

/db_xref="taxon:9606"

/clone="IMAGE:39491"

/clone_lib="Soares_infant brain INTB"

/sex="female"

/dev_stage="73 days post natal"

/lab_host="DH10B (ampicillin resistant)"

/note="Organ: whole brain; Vector: lambda B; Site 1: Not

I; Site 2: Hind III; 1st strand cDNA was primed with a Not

I - oligo(dT) primer [5']

AACGAGAGATGCGCGCCGAGAGATTTTCTTTTCTTTT 3']

Double-stranded cDNA was ligated to Hind III adaptors

(Pharmacia), digested with Not I and directionally cloned

into the Not I and Hind III sites of the lambda B vector.

Library went through one round of normalization. Library

constructed by Bento Soares and M. Fatima Bonaldo."

BASE COUNT 123 a 137 c 128 g 118 t

ORIGIN

Query Match 7.3%; Score 293.6; DB 22; Length 517;

Best Local Similarity 85.6%; Pred. No. 2.9e-56;

Matches 370; Conservative 0; Mismatches 55; Indels 7; Gaps 4;

QY 1187 gaccccaagacatccggcagctgtgacatggtcccttgaagagctaaacatgacgca 1186

DB 1 gaccccaagacatccggcagctgtgacatggtcccttgaagagctaaacatgacgca 1186

QY 1187 acagggagctcccgctatgagacacagagtgccacagccttgagagtgacg 1246

DB 61 acagggagctcccgctatgagacacagagtgccacagccttgagagtgacg 1246

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OY 1247 ccaacaatgaagctccagcaggttgatctcctcctcctccagccgctgtccta 1306
DB 121 ccaacacatgaagctccgacacttgcctcctcctcctcctcctcctcctccta 180
OY 1307 ccttatcagagacacacccctcctcagacagcccgctgttcccgctcagcgcgcgc 1366
DB 181 ccttcatccgggagacacccactcagacagcccgctgttcccgctcagcgcgcgc 240
OY 1367 tctgtctactacagatcacagcctcctcagagtcgttgcacacaggttgacacagcctct 1426
DB 241 tgnmgtcagacacagatcacagcctcctcagagtcgttgcacacaggttgacacagcctct 300
OY 1427 cagggaagaatacagcgtctcctcctcctcctcctcctcctcctcctcctcctcctc 1484
DB 301 cagggaagaatacagcgtctcctcctcctcctcctcctcctcctcctcctcctcctc 360
OY 1485 tctgtcagctt-ggagctcagctcagctcgtctcgtgagga-----ctgtcgttcttccacaa 1539
DB 361 agtcggagtcggagctcagctcagctcgttcttgaagatcttgagcttatttccagag 420
OY 40 ccacagccgctt 1551
DB 421 tcacagcagctt 432

RESULT 5
LOCUS 245329 337 bp mRNA EST 14-NOV-1994
DEFINITION HSC2M091 normalized infant brain cdna Homo sapiens cdna clone
ACCESSION C-2mg09, mRNA sequence.
VERSION 245329
KEYWORDS 245329.1 GI:574541
SOURCE EST.
human.
ORANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia;
Eutheria; Primates; Catarrhini; Homnidae; Homo.
REFERENCE 1 (bases 1 to 337)
AUTHORS Auffray,C., Behar,G., Bols,F., Bouchier,C., da Silva,C.,
Devignes,M.D., Duprat,S., Houligatte,R., Juneau,M.N., Lamy,B.,
Lorenzo,F., Mitchell,H., Marigage-Samson,R., Pletu,G., Pouillot,X.,
Sebastiani-Kabakchis,C. and Tessier,A.
IMAGE: molecular integration of the analysis of the human genome
and its expression
C. R. Acad. Sci. III, sci. Vie 318 (2), 263-272 (1995)
95377534
Contact: Genethon
Genexpress-Genethon
Genethon Centre de recherche sur le Genome Humain
1, rue de l'Internationale, BP60 91002 EVRY Cedex, FRANCE
Tel: 33169472800
Fax: 33160778698
Email: genexpress@genethon.fr
Single read.
Genexpress_library_id: C; Genexpress_sequence_id: y1c-2mg09
Seq primer: (-21)M13 universal.
Location/Qualifiers
1. 337
/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="normalized infant brain cdna"
/sex="Female"
/tissue_type="total brain"
/dev_stage="3 months old"
/note="Organ: brain; Vector: lambda B; Site: 1; HindIII;
Site: 2; NotI; sex:Female; dev_stage=3 months old;
Isolate-muscular atrophy patient; tissue_type=total
brain; total mRNA was oligo-(dT) primed and directionally
cloned 5' -> 3' into the HindIII -> NotI sites of the
lambda B vector. Clone library from B.Soures, Psychiatry
Dept. Columbia University, USA. Normalization_method:

```

```

BASE COUNT 81 a 106 c 82 g 67 t 1 others
ORIGIN
Query Match 7.2%: Score 289.6; DB 20; Length 337;
Best Local Similarity 91.1%; Pred. No. 2e-55;
Matches 307; Conservative 0; Mismatches 30; Indels 0; Gaps 0;

OY 1126 cgaccccaagacatccggcagctcgaatgttccctttagagagcctaacaatgactgc 1185
DB 1 cgaccacacagacattcgagacagctcgaatgttccctttagagagcctaacaatgactgc 60
OY 1186 aacagggagctcgtctgtcgaatgagacagaggtgcccccaagcccaactgtgagtgatc 1245
DB 61 AACAGAGAGCTGCGTGTGTGAGCAATGATGTGCCAGGCCAGACCTGGAGATGCATC 120
OY 1246 gccacaacatgaagctccagcaggttgatccctcctcctcctcctcctcctcctc 1305
DB 121 ACACACACATGAAAGCTCCGACCTTGGCTCATCTCTCTCTCTCTCTCTCTCTCTCTCT 180
OY 1306 acccttatcagagacacacccctcctcctcctcctcctcctcctcctcctcctcctc 1365
DB 181 ACCTTCATCCGGGAGACACCCACCTCATGAGGAGGAGTTCCAGCTGATGGCCACCCC 240
OY 1366 ctgctgtctactacagatcacagcctcctcagagtcgttgcacacaggttgacacgctc 1425
DB 241 CTGCTGTGCTACATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 300
OY 1426 tcagggaagaatacagcgtctcctcctcctcctcctcctcctcctcctcctcctcctc 1462
DB 301 TCAGGGAAGAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 337

RESULT 6
LOCUS T09073 364 bp mRNA EST 03-AUG-1993
DEFINITION EST06966 Infant Brain, Bento Soares Homo sapiens cdna clone H18071
ACCESSION T09073
VERSION T09073
KEYWORDS T09073.1 GI:390101
SOURCE EST.
human.
ORANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia;
Eutheria; Primates; Catarrhini; Homnidae; Homo.
REFERENCE 1 (bases 1 to 364)
AUTHORS Adams,M.D., Soares,M.B., Kerlavage,A.R., Fields,C. and Venter,J.C.
TITLE Rapid cDNA sequencing (expressed sequence tags) from a
directionally cloned human infant brain cdna library
JOURNAL Nature Genet. 4, 373-380 (1993)
MEDLINE 94004965
COMMENT Contact: Adams, MD
The Institute for Genomic Research
932 Clopper Road, Gaithersburg, MD 20878
Tel: 3018699056
Fax: 3018699423
Email: mdadams@tigr.org
Seq primer: M13 Reverse.
Location/Qualifiers
1. 364
/organism="Homo sapiens"
/db_xref="ATCC (inhost):85555"
/db_xref="taxon:9606"
/clone_lib="H18071"
/clone_lib="Infant Brain, Bento Soares"
BASE COUNT 70 a 100 c 106 g 85 t 3 others
ORIGIN
Query Match 7.2%: Score 287.4; DB 20; Length 364;
Best Local Similarity 86.5%; Pred. No. 6.5e-55;
Matches 315; Conservative 0; Mismatches 49; Indels 0; Gaps 0;

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us-09-284-180-1.rst

BASE COUNT	Bento Soares, P.N.A.S. in press	1 others
81 a	106 c	82 g 67 t
ORIGIN		
Query Match	7.2%: Score 289.6; DB 20; Length 337;	
Best Local Similarity	91.1%: Pred. No. 2e-55;	
Matches 307; Conservative	0; Mismatches 30; Indels 0; Gaps 0;	
Oy 1126	gcaccacaagacatccggscagtgctgatagtgtccctttagagagctaaacatgactgc	1185
Dd 1	cgaccacaaagacattccggacactgctgaatgctcccttcagagaactaaacatgacttc	60
Oy 1186	aacagggagctgctgtgcatgagacaacagatgtgcccaagcccagaccttgagagatgcac	1245
Dd 61	aacagaggctccctgtgctgctgacatgatgtgccccacagaccagactggaagatgcac	120
Oy 1246	gccacaacaatgaagctccacagctgttgatctcattccctctccctgcagaccggtgtc	1305
Dd 121	accacaacaatgaagctccggcactgttgactatctctccctgcctgacacgcgtactc	180
Oy 1306	accttatcagagaccacctctatcttgacagagcccggtgtcccgactgaagcgccgccc	1365
Dd 181	accttcatcccgagaccaccacctcatgacagacgacagtgatttcacagtgatgcccacccc	240

LOCUS	COORDINATES	SEQUENCE	FEATURE
Qy	1126	cgaccaccaagcattccggcgagctgcttgatagttcccttaaggagctaaacattactgc	1185
Db	1	CGACCACAAAGACATTTCGGACAGTGGTGGTCCCTTCAGAGAACTAAACATGACTGCG	60
Qy	1186	aacagggagctgctctgcatgagacaacagagtgccccagcccaagcctgagagatgcatc	1245
Db	61	AACAGAGGACTCCCTGTGATGGACAATGATGCCCCAGCCAGACATGGAAAGTGCATTC	120
Qy	1246	gccaaacaacatgaaagctccagagatttgatctctacactccctctgcagagccgctgctc	1305
Db	121	ACCAACAACATGAACCTCCGGCATTCTGGCTATCTCTCCCTGCTGACCGGCTACTC	180
Qy	1306	accttatcagagacacacccctctcaatggacagcccgctgtctccggcttgaacgcccgc	1365
Db	181	ACCTTATCTCCGGGACACCCACTCATATGACAGCGCAGATTTTCAGATGATGGCCACCCC	240
Qy	1366	ctgctgtgtaactacagataacagcctatctcgaagtcgtggtgcccaaggttgaccgccttc	1425
Db	241	CTGCTGTGTACACTACAGCTTACACGCTATCTCAAGTGTGGCCCAAGGATGACCAAGCTTC	300
Qy	1426	tcaaggaagaagatatgacgctgtctctacactcgaggagacag	1462
Db	301	TCAGGGAAAGATATGATATGTCTCTTACTCTGGGGACAG	337
RESULT	6		
LOCUS	T09073	364 bp	mRNA
	T09073		EST
			03-AUG-1993

LOCUS	T09073	364 bp	mRNA	EST	03-AUG-1993
DEFINITION	EST069966	Infant Brain,	Bento Soares	Homo sapiens	CDNA clone HIB071
ACCESSION	T09073				
VERSION	T09073.1	GI:390101			
KEYWORDS	EST.				
SOURCE	human.				
ORGANISM	Homo sapiens				
	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia;				
	Eutheria; Primates; Catarrhini; Homiidae; Homo.				
REFERENCE	1 (bases 1 to 364)				
AUTHORS	Adams,M.D., Soares,M.B., Kerlavage,A.R., Fields,C. and Venter,J.C.				
TITLE	Rapid CDNA sequencing (expressed sequence tags) from a				

CONTACT
Contact: Adams, MD
The Institute for Genomic Research
932 Clopper Road, Calthersburg, MD 20878
Tel: 3018699056
Fax: 3018699423
Email: mdadams@igf.org
Seq primer: M13 Reverse.
location/qualifiers

FEATURES	Source	Location/Qualifiers
		1..364
		/organism="Homo sapiens"
		/db_xref="ATCC (lnhost):85555"
		/db_xref="taxon:9606"
		/clone="HIB071"
		/clone_id="Infant Brain, Bento Soares"
BASE COUNT	70 a	100 c 106 g 85 t 3 others
ORIGIN		
Query Match	7.28:	Score 287.4; DB 20; Length 364;
Best Local Similarity	86.5%:	Pred. No. 6.5e-55;
Matches 315; Conservative	0;	Mismatches 49; Indels 0; Gaps 0;

356 RAVLNGPPEFLKH-DCNRLPVNDNEVPQRPPECIANNMKLQOGSSLSLDPRLVTFIR 414
 375 SHTLDEAV-PAFTRPILIRISLOVRFKIAVDOOVRTPDKAVDVLFGTDGKVIKA 433
 415 DHPRLDRPVPFAD-GRPLLVTDITAY-L-RV-VAHRVTSLSKEVDVLYLGEDGHLRA 470
 434 INSASFSSDVTVDVYIEELQVLPQGVPKLYVVRMGDSKLVVSDDEILAIKLHRC 493
 471 VR---I-GAO-L-SV-LEDLALFPEQVPEM---KLX-HDW-LVYGSHTVTOVTSNC 518
 494 GSDKTNCRECVSLDDPYAM 514
 519 G--RLQSCSECTLAQDPVCAM 537
 RESULT 13
 ID M57259 standard; Protein: 929 AA.
 02-SEP-1998 (first entry)
 DE Rat; semaphorin Y.
 KW Rat; semaphorin Y; nerve extension inhibitor; central nervous system;
 OS peripheral nerve growth.
 PN 08811216-A1.
 PD 19-MAR-1998.
 PF 09-SEP-1997; J03167.
 PR 08-AUG-1997; JP-227220.
 PA 11-SEP-1996; JP-263565.
 PI (SUMU) SUMITOMO PHARM CO LTD.
 PI Kikuchi K, Kimura T;
 DR WPI: 98-250958/22.
 DR N-PSDB: V28913, V28914.
 PT DNA encoding human and rat semaphorin Y - an inhibitor of nerve
 extension.
 PS Claim 1: Page 54-58; 85pp; Japanese.
 CC The present sequence represents rat semaphorin Y, which inhibits nerve
 extension. Semaphorin Y genes and proteins may be used to inhibit
 CC peripheral nerve growth. Semaphorin Y antagonists can be used to
 CC accelerate regrowth of the central nervous system.
 SQ Sequence 929 AA;

Query Match 13.0%; Score 735; DB 1; Length 929;
 Best Local Similarity 36.2%; Pred. No. 2,026-94;
 Matches 148; Conservative 95; Mismatches 137; Indels 29; Gaps 20;
 69 NRTLLVAARDHVFSDLOAEGBEGVLVKNKFLTR-SQ-DHNCNAVRLKLTDECYNTIRV 126
 79 SHTLVGARDISFALTLPF--SGE--RRRR-IDMWVPETHRONCKKKKEDCHNFIOI 133
 127 LVPMDSTLLACGTNSFSPVCRSYGITSLOEGEEL-SGARCPDPAQSTVAISAESL 185
 134 LAIVASHLLTCGFAFPKCGVIDVSSFOY-ERLESGRKCPPEPORAANAAGVYL 192
 186 YSATRADFOASDAVYRSLGPOP-TRSAKYDSKWLREPHVQA--L-----EHGDH- 234
 193 YTAIVKNLGEPIITSRAVGRADWIRTELSS-WLNAPAVAAVLSPAEMGEDDGDDE 251
 235 VYFELPERSLKRTDGLGVQFSRVAVCKRDMGSPRALDRHMTSFLKRLNCVPGDST 294
 252 IFFFTETRS-VYLDSEYERIKVPRVARCAGDLGR-KTLQGRWTFKADLLCPGEHGR 309
 295 FYFDVQLGTPVNLHGSA-LF-GVPTTQNTSIPGSAVCAFYLDIERGEGEKKEDRS 352
 310 AS-GVLQAMAEIRPQPGAGTPIFYGIFSSQWEGAISAIVCAFRPDIDRAVINGPRELKH 368
 353 LDGAWT-VFSEDKVSPRPGSCAGVG-ALFSSSRDLPDDVLTFIRKAPLIDPAVPPVT 410
 369 -DCNRGLPVMDNEVPQRPPECIANNMKLQOGSSLSLDPRLVTFIRKAPLIDPAVPPVT 427
 411 HOPLLTISRALLTOVAVDAGNAGPHRNTTVFLGSDGTIVKVLTPPGQ 459
 428 GRPLLVTDITAYLVRVAVHRVTSLSKEVDVLYLGEDGHLRAVIAQO 476

RESULT 14
 ID M57260 standard; Protein: 930 AA.
 AC M57260;
 DT 02-SEP-1998 (first entry)
 DE Human semaphorin Y.
 KW Human; semaphorin Y; nerve extension inhibitor; central nervous system;
 OS peripheral nerve growth.
 PN 08811216-A1.
 PD 19-MAR-1998.
 PF 09-SEP-1997; J03167.
 PR 08-AUG-1997; JP-227220.
 PA 11-SEP-1996; JP-263565.
 PI (SUMU) SUMITOMO PHARM CO LTD.
 PI Kikuchi K, Kimura T;
 DR WPI: 98-250958/22.
 DR N-PSDB: V28915, V28916.
 PT DNA encoding human and rat semaphorin Y - an inhibitor of nerve
 extension.
 PS Claim 1: Page 65-70; 85pp; Japanese.
 CC The present sequence represents human semaphorin Y, which inhibits
 CC nerve extension. Semaphorin Y genes and proteins may be used to inhibit
 CC peripheral nerve growth. Semaphorin Y antagonists can be used to
 CC accelerate regrowth of the central nervous system.
 SQ Sequence 930 AA;

Query Match 12.9%; Score 732; DB 1; Length 930;
 Best Local Similarity 36.2%; Pred. No. 3,836-54;
 Matches 148; Conservative 94; Mismatches 137; Indels 30; Gaps 20;
 70 NRTLLVAARDHVFSDLOAEGBEGVLVKNKFLTR-SQ-DHNCNAVRLKLTDECYNTIRV 127
 79 SHTLVGARDISFALTLPF--SGE--RRRR-IDMWVPETHRONCKKKKEDCHNFIOI 133
 128 LVPMDSTLLACGTNSFSPVCRSYGITSLOEGEEL-SGARCPDPAQSTVAISAESL 186
 134 LAIVASHLLTCGFAFPKCGVIDVSSFOY-ERLESGRKCPPEPORAANAAGVYL 192
 187 YSATRADFOASDAVYRSLGPOP-TRSAKYDSKWLREPHVQA--L-----EHGDH- 235
 193 YTAIVKNLGEPIITSRAVGRADWIRTELSS-WLNAPAVAAVLSPAEMGEDDGDDE 251
 236 VYFELPERV-VEDARLGVQFSRVAVCKRDMGSPRALDRHMTSFLKRLNCVPGDST 294
 252 IFFFTETSRVLDV-YERIKVPRVARCAGDLGR-KTLQGRWTFKADLLCPGEHGR 309
 295 FYFDVQLGTPVNLHGSA-LF-GVPTTQNTSIPGSAVCAFYLDIERGEGEKKEDRS 352
 310 AS-GVLQAMAEIRPQPGAGTPIFYGIFSSQWEGAISAIVCAFRPDIDRAVINGPRELKH 368
 353 LDGAWT-VFSEDKVSPRPGSCAGVG-ALFSSSRDLPDDVLTFIRKAPLIDPAVPPVT 410
 369 -DCNRGLPVMDNEVPQRPPECIANNMKLQOGSSLSLDPRLVTFIRKAPLIDPAVPPVT 427
 411 HOPLLTISRALLTOVAVDAGNAGPHRNTTVFLGSDGTIVKVLTPPGR 459
 428 GRPLLVTDITAYLVRVAVHRVTSLSKEVDVLYLGEDGHLRAVIAQO 476
 RESULT 15
 ID R71384 standard; Protein: 712 AA.
 AC R71384;
 DT 21-NOV-1995 (first entry)
 DE Tribolium semaphorin I protein.
 KW Semaphorin; grasshopper; human; vaccinia virus; Drosophila; Tribolium;
 KW varicella major virus; smallpox; semaphorin receptor binding activity;
 KW modulation; nerve cell growth; immune response; viral pathogenesis;
 OS neurological disease; neuro-regeneration; oncological infection.
 PN Tribolium sp.
 PN W09507706-A.
 PD 23-MAR-1995.

San Jun 4 09:53:55 2000

PF 13-SEP-1994; U10151.
PR 13-SEP-1993; US-121713.
PA (REGC) UNIV CALIFORNIA.
PI Bentley DR, Goodman CS, Kolodkin AL, Matthes D;
PI O'Connor T;
DR MPI; 95-131177/17.
DR N-PSDB; 087446.
PT New class of semaphorin peptide(s) and polypeptide(s) - are
PT potent modulators of nerve cell growth and regeneration
PS Example 2; Page 85-88; 101pp. English.
CC The sequence of the beetle Tribolium semaphorin I protein. The gene was
CC isolated by PCR using Tribolium genomic DNA. The proteins encoded by the
CC grasshopper semaphorin I (087441), human semaphorin III (087442),
CC vaccinia virus semaphorin IV (087443), Drosophila semaphorin I and II
CC (087444-5), Tribolium semaphorin I or variola major (smallpox) virus
CC semaphorin IV (087447) genes were used to generate a series of peptides
CC (R70370-R70418), which retain semaphorin receptor binding activity. The
CC semaphorin derived or semaphorin receptor derived peptides are potent
CC modulators of nerve cell growth, immune responsiveness and viral
CC pathogenesis. They can be used in diagnosis and treatment of neurological
CC disease and neuro-regeneration, immune modulation and diagnosis and
CC treatment of viral and oncological infection and diseases.
SQ Sequence 712 AA;

Query Match 12.7%; Score 719; DB 1; Length 712;
Bit Local Similarity 32.2%; Pred. No. 6.19e-53;
Matches 168; Conservative 131; Mismatches 174; Indels 49; Gaps 33;

DB 39 FTGNATPDPHFIVINODESTILVGGRRNRYNLSI-FDLSEKRGRIIDPSSDAHGOLCIL 97
QY 62 FAASHYTNYSALVDPASHLYVGARDISIFALTLPS-GER-PRRIDMVPETHRONCRK 119
DB 98 KGRTDCCCONVIRILYSESGKLVICGTSYKPCRTYAFKRGKLYEKEVEGIGLCPYN 157
QY 120 KGRKEDCHNFIOLAIYVNSHLTLCGTFADPCGVIVDSSFO-OVERLESGRKCPFE 178
DB 158 PEHNSTSVSYNGOLFSAIVADFSGDDPLIYREPORTE--L-SD-LKO-LNAPNFVNS-V- 210
QY 179 PAQRSAVMAVGVLVYATVKNFLTEPLISRAVGAEDMIRTELSSWLNAPAFVAAVYL 238
DB 211 --A-YGDY----IEFFYRETAVEYMNCGKIYSRAVACDKDKGPRHQRDNTSFLKA 262
QY 239 SPAEMGEDDDEDEFFETERSVLDSEYRIKVPRAVACAGDLGKRKTLQORWTFELKA 298
DB 263 RLNCSTIGEYFYDEIQSTSDIYEGRYNSDSSKIIYGLITTPVNAIGSALICAYOMAD 322
QY 299 DLCPGP-EGGRASGVLOAMAEI--RPQPGAGTPIFYGIFFSOWEGAAISAVCAFRPD 354
DB 323 ILRVFEGSFKHQETINSNM-LPVQNLVPEPRPGQV---R-D--SRI-LPDKNVNFI 372
QY 355 IRAWLNGPFRELKH-DCNRGLPVMDNEVPOPRGEICANNMKLLQFGSSLSLPDRLVLEI 413
DB 373 KTHSLME-DYPALEFGKVLVYVLSQYFTALTVPQYKTN-NQYLDVLYIGTDGKVLK 430
QY 414 RDPFLMDRPVFPDGRLELYTTDTAY-LR-V-VAHRTSLSGKEY-DVLYLGTEDGHLHR 469
DB 431 AVNIPKRAKALYRKRTYSVHPGAVPVKOLAPGYGKVVVVGKDEIRLANLNHCASKT 490
QY 470 AVRIGA-QL-SVL-EDI--ALFEPQVESHKLYHDM--LLVGSHTVTOVNTSNGRLQ 522
DB 491 RCKDCVELQDPHCAMAKONLCVSIIDTVTSYRFLIOPDVRCGD 532
QY 523 SCSECIADDPVCAMSFRLDACVA-HA-GEHRGVQDIESAD 562

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